

## ABSTRACT OF THE DISCLOSURE

A magnetic first detecting cylinder covers a magnetism leakage preventing member covering a first shaft. A second detecting cylinder is rotated along with a second shaft  
5 connected to the first shaft and one end thereof is opposed to one end of the first detecting cylinder with a clearance. A reluctance with respect to a passing magnetic flux in a first magnetic circuit constituted by generating the magnetic flux passing the first detecting cylinder and the second detecting  
10 cylinder by a first coil, is changed in accordance with an elastic relative rotational amount by a change in a transmitting torque of the two shafts. The magnetism leakage preventing member is molded from a synthetic resin material injected into a molding die. The first shaft and the first  
15 detecting cylinder are integrated to the magnetism leakage preventing member molded by being inserted into the molding die before injecting the synthetic resin material.